Medical Myth

Myth: Codeine is an effective cough suppressant for upper respiratory tract infections

Clinicians commonly prescribe codeine to reduce cough in patients with upper respiratory tract infections. The practice is now so widespread that many patients request codeine during such infections. Because most patients find coughing, particularly at night, extremely unpleasant, an effective antitussive is often desirable. Although the literature in this area is scant, some information is available, and it does not support a role for codeine in the relief of cough during these infections.

In a double-blind trial, Eccles and colleagues randomly allocated 91 patients with nonproductive cough for 6 to 96 hours to receive codeine or placebo.[1] Counts of the number of coughs were made in the laboratory for 3 hours, followed by patient-scored cough counts at home for 4 days. Patients were given 30 mg of codeine in syrup or syrup alone. During the 3-hour laboratory phase, there was no objective decrease in the number of coughing episodes. During the home phase, the result was the same. In both groups, cough decreased significantly over time, but codeine had no effect.

In a similar double-blind study by Freestone and Eccles, 82 subjects received codeine or placebo for cough associated with the "common" cold.[2] Scores of cough duration, intensity, and frequency were made. In this study, codeine was no more effective than placebo for reducing any of the variables measured.

In children, the effect of codeine is equally as dismal. Taylor and associates randomly allocated 49 pediatric patients to receive codeine, hydrocodone, or placebo on 3 consecutive nights at bedtime. Parents subjectively measured cough frequency and the effect of cough on a number of outcomes, including sleep duration. Neither codeine nor hydrocodone had an effect on cough duration or intensity in the study.[3]

Cough is an irritating symptom. Reducing cough during an upper respiratory tract infection would be a laudable goal. Codeine has been considered to be the most effective antitussive for acute cough and has been regarded as the reference drug with which the effects of other antitussive agents should be compared.[4] However, as discussed, codeine apparently does not reduce cough during such an infection. Because codeine is not only ineffective but also frequently associated with gastrointestinal symptoms, the use of codeine as a cough suppressant should be discouraged and acknowledged as a prevalent medical myth.

References

1 Eccles R, Morris S, Jawad M. Lack of effect of codeine in the treatment of cough associated with acute upper respiratory tract infection. *J Clin Pharm Ther* 1992;17:175-180.
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